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January, 1929

FOREIGN AGRICULTURAL EXTENSION ACTIVITIES

*England, Wales, Uruguay, Italy,
Germany, New Zealand, and South Africa*

J. M. Stedman



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Cooperative Extension Work in Agriculture and Home Economics
Extension Service Circular 96

January, 1929

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England and Wales, Uruguay, Italy, Germany, New Zealand,
South Africa

Abstracts from Recent Reports and Publications Received by
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THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

REPORT OF THE PHYSICS DEPARTMENT

FOR THE YEAR 1961-1962

CHICAGO, ILLINOIS

1962

PHYSICS DEPARTMENT
UNIVERSITY OF CHICAGO
CHICAGO, ILLINOIS

England and Wales

Extension work in 1926-27. - In a recently published Report on the Work of the Research and Education Division of the Ministry of Agriculture and Fisheries for 1926-27, a somewhat detailed account is given of the status of extension work conducted under the supervision of the government. A brief summary follows:

In 1926-27 there were 49 agricultural organizers in charge of the extension work in 53 of the 62 administrative counties of England and Wales, assisted by 295 whole-time workers, men and women, who gave instruction in agricultural subjects (chemistry, botany, zoology, and the like), horticulture, dairying, poultry-keeping, dairying and poultry-keeping combined, farriery, beekeeping, veterinary science, farm accounting, and manual processes. In addition there were a number of part-time instructors in veterinary hygiene, beekeeping, and agricultural manual processes, which include plowing, hedge-laying, ditching, thatching, sheep-shearing, basket-making, hurdle and spar-making, milking, and so forth. Only one county, the Soke of Peterborough, had no whole-time extension staff, and in 8 others, Bedfordshire, Isle of Wight, Huntingdon, Middlesex, Norfolk, Isle of Scilly, West Suffolk, and Isle of Ely, there was no agricultural organizer, though the special characteristics of some of these made the appointment of an organizer less necessary, and in Norfolk County the director of the agricultural station performed a good many of the duties of an organizer.

The following table gives the approximate number of and attendance of courses and lectures recognized under the regulations of the Ministry of Agriculture, in 1926-27, in comparison with these items for the two previous years:

	1926-27		1925-26		1924-25	
	No.	Number persons attending	No.	Number persons attending	No.	Number persons attending
Organized day courses.....	320	3,450	325	3,410	322	3,023
Evening classes.....	310	7,100	346	7,717	295	6,116
Correspondence courses....	9	60	6	72	5	73
Manual process courses....	350	2,900	276	2,231	141	1,234
Lectures, demonstrations, and other meetings.....	9,500		8,873		8,376	

For organized day courses, evening classes, and correspondence courses the figures for 1926-27 are not satisfactory in every case as compared with those of the two previous years, which is attributed to insufficient funds

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at the disposal of the local authorities. The greatest increase in number and attendance is seen in the manual process courses due to the fact that special attention has been given to instruction in these subjects, on account of the need of skilled laborers on the farm. Since provisions were made in 1925 by the Ministry of Agriculture and the Board of Education for rural continuation instruction to boys and girls from 14 to 16 years old, some counties have admitted young people of these ages to the above mentioned courses, formerly intended only for adults, that is, persons over 16 years of age.

Tours of two blacksmiths' vans, equipped with lathe, anvil, portable forge, hand and power drilling machines, emery grinder, acetylene welding and cutting plant, work bench and outfit of tools, begun about three years ago to demonstrate the use and repair of modern equipment for blacksmiths' work as well as of farm implements and machines, had very successful results in 1927. Tours were made of Essex, Notts, Surrey, Worcester, and West Suffolk Counties. The attendance at the demonstrations was satisfactory and a great deal of interest was shown by the village smiths and other mechanics. Boys from the senior classes in the rural elementary schools also visited the vans during school hours.

Rural continuation classes for boys and girls from 14 to 16, arrangements for which were first agreed upon by the Ministry of Agriculture and the Board of Education in 1925, and were revised in 1927, have as yet been started in only a very small way, due largely to insufficient funds. The local authorities in several counties have acted upon the suggestions given by the Interdepartmental Committee in 1927 for organizing such courses. Classes of evening instruction to last through the winter were arranged in Shropshire for boys and girls from 14 to 20 years of age in English, agricultural mathematics, rural lore (which includes elementary agricultural history, weather observation, and history of implements), elementary horticulture, elementary agriculture, and poultry management, with instruction in woodwork, horse-shoeing, and the management of internal combustion engines for boys, and cooking and domestic science for girls. Cornwall, Devon, and some other counties admitted boys and girls over 14 to the various courses for adults, and added general subjects to the program. In Norfolk County rural science was added to the list of subjects taught in the normal evening courses for young people in some cases. In Hertfordshire County the experiment was tried of taking school children to local farms during school hours for instruction in rural industries, and where necessary, farm institute teachers gave their services in this connection.

The young farmers' clubs, the supervision of which was undertaken by the Ministry of Agriculture in October, 1924, have now become an established and permanent part of extension work. During 1927 special attention was given to the matter of formulating a sound and uniform basis of organization rather than to increasing the number and membership of clubs. With this end in view, a critical investigation was made of the status of clubs in existence, and some were discontinued.

This accounts for the fact that in 1927 there were only 85 clubs with 1,697 active members, while in 1926, there were 91 clubs with 1,942 members. As a result of this investigation, however, the movement has been placed on a firmer footing and will no doubt begin to expand. The rural community councils have aided in putting club work on a sound basis, and a cooperative system, worked out between them, the local education staffs and county directors of education has been adopted in West Sussex, Hereford, Gloucester, Somerset, Lincoln, Hertford, Oxford, Kent, Hants, and Monmouth Counties. The influence of this work with young people is being felt outside of the club which forms a center for the establishment of other educational work, as instruction in home management, economics, and hygiene in the case of girls. Young people who are successful in club work are induced to take courses at farm institutes.

A great deal of the attention of local authorities is directed to instruction in dairying. Progress is being made in many phases of this work as shown by the following table comparing statistics for the past three years:

Instruction in
dairying for
three years end-
ing Mar.31,1927

Comparative Statement Regarding Dairying Instruction by
Local Authorities in England and Wales for Three Years
Ending March 31, 1927

	1926-27	1925-26	1924-25
Total number of instructors(men and women) including part-time teachers.....	77	72	69
Traveling dairy schools:			
Teachers employed.....	32	38	39
No.students receiving instruction.....	2,767	2,728	2,585
No.farms visited.....	974	1,106	817
No.farmers participating in cooperative cheese-making schemes.....	51	42	18
Lectures and demonstrations:			
Clean milk production:			
Number.....	582	667	544
Approximate attendance.....	17,700	17,000	12,600
General dairying:			
Number.....	405	290	198
Approximate attendance.....	16,000	10,000	6,300

In the following table statistics are compared for traveling cheese and butter-making schools and for milking classes in 1925-26 and 1926-27:

Attendance at Traveling Cheese and Butter-making Schools, Cooperative Cheese Schools, Milking Classes in 1925-26 and 1926-27

	1926-27	1925-26
Number of students receiving instruction at:		
Traveling cheese schools (including joint cheese and butter-making schools.....)	566	487
Cooperative cheese schools.....	710	766
Traveling butter-making schools (including joint cheese and butter-making schools.....)	2,001	2,018
Other butter-making classes.....	53	30
Various centers in milking.....	843	542

The greatest increase in dairy instruction is noted in the classes for milkers, held to promote clean milk production, which has received a great deal of attention in recent years. Clean milk competitions as a part of the scheme of clean milk production are becoming increasingly popular with local authorities, as they constitute a means of instruction for both farmers and farm workers. The farmers are interested in them as through them they obtain better work from their employes, and often a better market for their milk. As a result of the competitions farm workers also take more interest in their work as they acquire a better understanding of it, and more value is placed on their labor when they hold efficiency certificates. In 1926-27 the clean milk competitions increased from 34 to 40, the number of farms competing from 818 to 1,062, and the number of cows in the competitions from 20,695 to 28,520.

On April 1, 1928, there were 67 officers on the staffs of the advisory centers located at an university, a research institute, or an agricultural college in the 14 provinces into which England and Wales have been divided for the purpose of specialist advisory work. They included 13 chemists, 10 dairy bacteriologists, 12 agricultural economists, 14 entomologists, 14 mycologists, and 4 specialists in veterinary science. These specialists, whose salaries and expenses are met by grants from the Ministry of Agriculture and Fisheries, cooperate with the county organizers, and visit the farmers to give them expert advice on matters connected with their various branches. They also conduct investigational work in the provinces to which they are assigned, and do a small amount of teaching in the institutions at which they are located.

Extension work in Devon County. - Devon, one of the larger administrative counties in England, has adopted a method of its own to facilitate the conduct of extension work. As in the other counties, agricultural education is under the control of the county agricultural committee, and in addition there are district subcommittees for agricultural education - one for each district, north, south, east, and west - into which the county has been divided. The agricultural organizer and his immediate staff, the central extension office of the county, have their headquarters at Exeter, while a district lecturer or district agent is stationed at a con-

venient place in each of the four districts and works under the supervision of the organizer. The subcommittee which is appointed every year, has 24 members, the members of the county agricultural committee forming the nucleus, the other members being members of the county council residing in the district who are not on the agricultural committee, prominent farmers, and other persons keenly interested in agriculture, horticulture, and related subjects.

The duties of the subcommittee are as follows:

- | | |
|---------------------------------|--|
| Duties of district subcommittee | <p>(1) To act in an advisory capacity to the county agricultural committee on matters relating to their own district.</p> <p>(2) To submit suggestions on the best means of furthering agricultural education in their own district and throughout the county.</p> <p>(3) To arrange for and supervise the holding of manual process classes in their district.</p> <p>(4) To arrange and supervise experimental work in their district.</p> <p>(5) To assign grants for prize money at local shows.</p> <p>(6) To act as a connecting link between their district and the county agricultural education department.</p> |
|---------------------------------|--|

The subcommittees hold meetings every three months or oftener and make a report to the county committees. The advantage of this system is that the agent in charge of each district deals with its particular problems and keeps the agricultural education committee informed in regard to all agricultural and related industries. Experimental work is also greatly furthered as the members of the subcommittees are connected with agriculture and its related lines, and are interested in its progress.

Traveling dairy school	<p>Traveling dairy, poultry, and farriery schools are an important feature of extension work in Devon County, and since the provisions for rural continuation instruction for boys and girls from 14 to 16 years of age went into effect, are attended by both adults and young people. The dairy school course lasts 10 days and the instruction includes butter-making and general dairy work. The maximum number of pupils that can be accommodated at a class is 12, and each one is required to pay a fee of 2 shillings 6 pence (about 60 cents) for the course. The school is held in a barn, garage, or workshop where a water supply is available. A competition is held at the close and prizes and certificates awarded. Classes in practical cheese-making, consisting of 12 lessons of three or four hours each, at each center, are held in the summer. The committee provides the equipment and the pupils furnish the milk, in return receiving free instruction. There are usually only four or five pupils in a class, though as many as 12 can be accommodated, if a sufficient quantity of milk is available. A competition is held at the close of the course, and prizes and certificates are awarded.</p>
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Cheese-making classes

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The traveling poultry school holds two courses at a center, each attended by 6 to 10 pupils. All the equipment needed for instruction, incubation, use of brooders, and poultry management is carried from center to center. Each course lasts three weeks, classes two hours in length being held from Monday to Friday. Each pupil pays a fee of 2 shillings 6 pence for the course. A competition is held at the close of the school, and cash prizes and certificates are awarded to successful competitors.

Poultry school

A van equipped with the necessary forges, anvils, and so forth, for a class of four, tours the county for the purpose of giving instruction in farriery. A course consists of 10 lessons, each lasting from 6 p.m. to 8:30 p.m., and includes instruction in the anatomy of a horse's foot, oxy-acetylene welding and other subjects connected with farriery. Examinations are held at the close of the course, and the county committee awards the registered shoeing smith a certificate from the Worshipful Company of Farriers to those who pass successfully.

Traveling farriery school

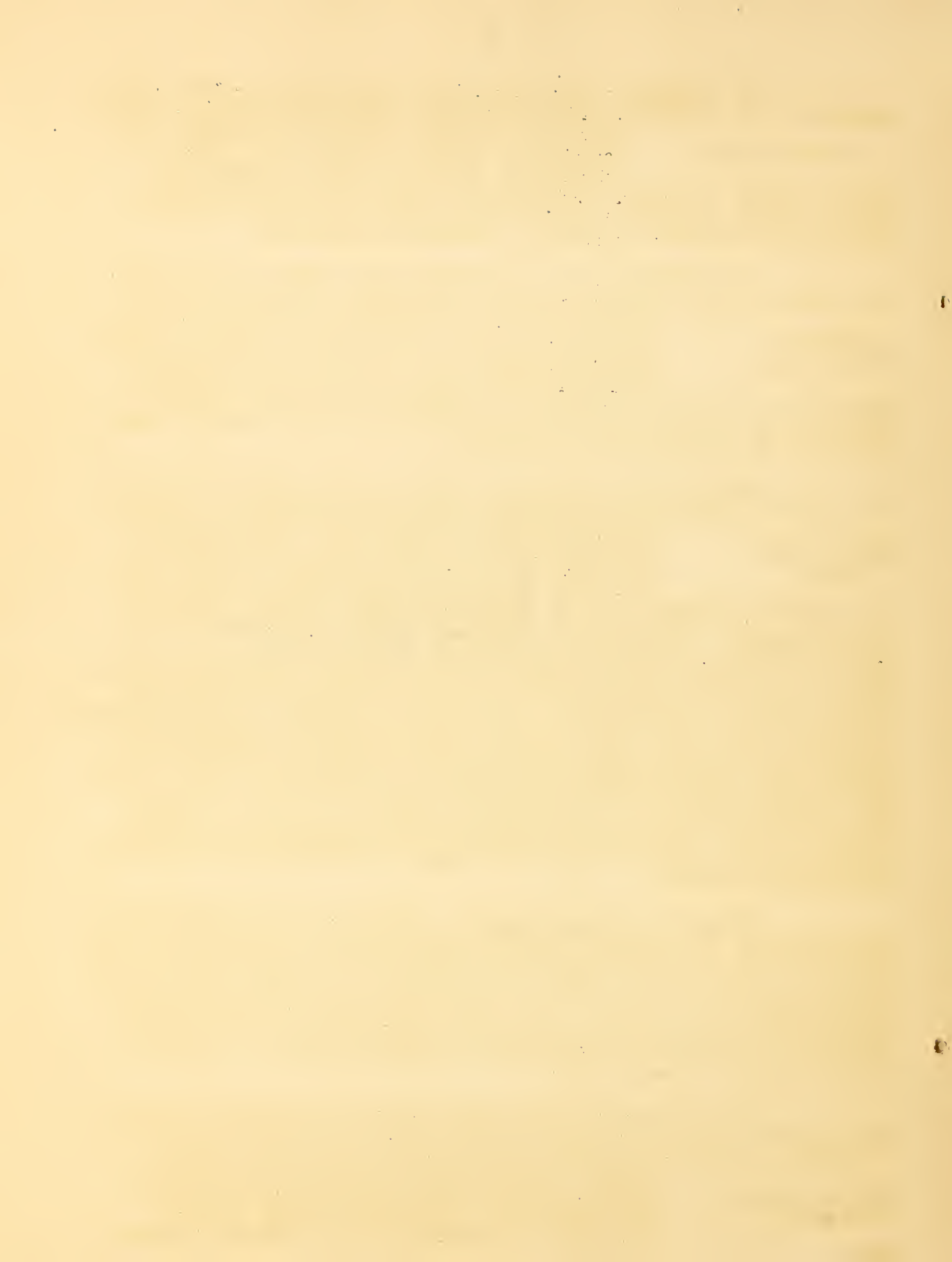
Manual process classes are perhaps the most popular of the itinerant classes in Devon County, especially since the provisions for rural continuation instruction allow the attendance of young people from 14 to 16 years of age. During 1926-27 and 1927-28 one fifth of the pupils were in the latter class. Among the subjects taught in Devon County are thatching, including rope and spar-making; plowing, hedging, ditching, livestock judging, sheep shearing, rick-making, milking, management and care of farm machinery. The district subcommittees make arrangements for and supervise the holding of manual process classes, which are organized at the request of the local or parish committee. After the latter has furnished the district committee the details of time and places of meeting, and made provision for plows, horses, ricks for thatching, sheep for shearing, according to the classes to be held, the county committee gives assistance in advertising the classes through printed posters and circulars. The classes are usually moved from one farm to another in the community instead of being all held at one place. Each class consists of at least three and not more than 10 pupils. No pupil receives remuneration for work done in the classes, but travel allowance is made in special cases to both pupils and instructors who come from a considerable distance.

Manual process classes

Work of the county organizers. - The work of the county agricultural organizer, who occupies a position somewhat similar to that of the county agent leader, with criticisms of the present system of agricultural education in the county form the subject of an article in the 1928 volume of "Agricultural Progress," the journal of the Agricultural Education Association. The substance of this article, written by the Principal of the East Anglian Institute of Agriculture or Farm Institute in Essex County, who is also the county organizer, is as follows:

The county agricultural organizer has four lines of activity: advisory work, research work, demonstration work, and instruction or training of students. Advisory work which includes putting information obtained through research withing the reach of the practical farmer in a form which he can understand and use, and endeavoring to induce him to adopt the best practices, is considered the most important function

Advisory and research work



of the organizer. Research work, another line of activity for the organizer who is fitted for it, does not require specially equipped stations and special appropriations. Farmers are daily putting into practice the results of investigational work in connection with farm problems conducted by the county organizers and their assistants. Some of the most valuable work of this kind has been the investigation of methods adopted by farmers who have succeeded in making a living in spite of difficult times.

Demonstration plots are very necessary to show the results of research by scientific workers, as farmers are more easily reached through the eye than the ear. The most valuable demonstration plots are those on fields along the main roads, and consist of a series of plots, treating of different subjects, arranged for visiting on a circular tour, and worth the trouble and expense of organized visits. The smallest area the farmer is willing to handle with the least additional labor and expense must be considered in determining the size of the plots. All plots should be labeled so as to be self-explanatory.

The training of students, though given the last place in the list of organizer's duties, is nevertheless regarded as an important activity. The training of farmers' sons is too often put first in the organizer's duties, as county committees often make the great mistake of regarding agricultural education as useful only to young people, just out of school, but of no value to the practical farmer. This is very wrong, as the organizer's first duty is to keep practical adult farmers informed of important results obtained through experiment and research. In many cases as much as 90 per cent of the organizer's time is taken up with training farmers' sons in farm institute courses and evening classes. In every county there should be a system of organized discussions of agricultural problems among the farmers, either at the meetings of the National Farmers' Union, or special discussion society meetings, and series of single lectures on interesting topics of special importance should be arranged and followed by discussions. The list of lecturers furnished by the Ministry of Agriculture is far from satisfactory, as it does not include the county organizer and his staff who are best qualified to give lectures to farmers.

The entire system of county agricultural education needs to be reorganized. In the counties with farm institutes, the principal of the institute is the county organizer, but it is doubtful that this is a wise plan. The organizer in charge of a farm institute has little time for county extension work, but, on the other hand, without an institute he can not accomplish much if his staff is small and he has to give most of his time to administrative and committee work and to traveling. There is not a single county with an ideal system but there are good points in the systems used in several counties, which might be combined to produce a system far better than those used at present. District lecturers might be employed in every county as is being done very successfully in Yorkshire, Devonshire, Wiltshire, and Derbyshire. The use of district subcommittees of agricultural

education now employed in Devonshire should be investigated. There should be closer cooperation between the county organizer and the advisory officers. The system of county experimental, demonstration, and advisory work needs to be reorganized, as the weakest link in the extension work of the county is that which connects the scientific research worker with the practical farmer, that is, the field of the organizer and his staff. The farmer is somewhat prejudiced against the scientists, as he has not received the help from their efforts which he has counted on to relieve the present agricultural depression. Too long a time is required to put results of research work in the farmer's hands in a form which he can understand and use. There should be some method of insuring the provision of adequate funds in every county. More attention should be given to the agricultural education of the farmer's wife to enable her to properly manage the branches of farming coming under her jurisdiction.

U r u g u a y

Board of Agronomy.— The decree of January 15, 1926 of the National Council of Administration created the Board of Agronomy (Dirección de Agronomía) to take the place of the National Inspection of Stock-raising and Agriculture, as the branch of the Ministry of Industries charged with promoting the agricultural interests of the republic. The scope of work of the Board of Agronomy, as outlined by the decree, is much more extensive than that of the National Inspection of Stock-raising and Agriculture, and includes the sections of Agricultural Development and Protection; Information and Instruction; Forestry; Agricultural Economy and Statistics; Branding and Marking Livestock; and Laboratories.

Sections or divisions	of work of the Board of Agronomy, as outlined by the decree, is much more extensive than that of the National Inspection of Stock-raising and Agriculture, and includes the sections of Agricultural Development and Protection; Information and Instruction; Forestry; Agricultural Economy and Statistics; Branding and Marking Livestock; and Laboratories.
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Regional agronomists	Improving and increasing plant and livestock production, instructing the farmers and assisting them in their problems constitute important functions of the Section of Agricultural Development and Protection, with which the Section of Information and Instruction collaborates to a certain extent. For agricultural purposes the country is divided into 12 zones or districts, some including sections of two and others three departments, each in charge of a regional agronomist. The agronomists, the extension agents of the Section of Agricultural Development and Protection, reside in the locality assigned to them, and hold themselves in readiness to give assistance, free of charge, to the farmers and stockraisers of their own as well as, when necessary, to those of other districts, regarding their farm problems, especially matters connected with the prevention or control of plant diseases. The agronomists are charged with the inspection of all plants imported and exported; protection against plant diseases and pests; the study of the natural, technical, and economic conditions of their districts, as a basis for the work of rural development; and the employment of every means in their power to improve and increase plant and livestock production. They give simple talks and lectures on subjects of special importance in the buildings of rural societies, educational institutions, and in country districts, at which products, specimens, and models are exhibited, and when possible, lantern slides or motion pictures are shown. The agronomists take daily notes on their travels, inspections, and other work, and submit a monthly report to the chief of the Section of Agricul-
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tural Development and Protection. To encourage friendly rivalry among rural producers, the agronomists organize competitions in agriculture and stock-raising, and award prizes to those who meet requirements in order to introduce improved methods of production and promote the development of horticulture, fruit-tree growing, dairy farming, raising pigs and poultry, and other rural industries. Simple experiments of economic technical character are conducted by the agronomists on farms in their districts where the farmers are willing to allow the land to be used for this purpose. In the Department of Canelones the Section of Agricultural Development and Protection maintains a demonstration farm which serves as a model farm and a means of instruction to all the farmers of the districts. The section has organized a service of inspection of dairy cows, which are subjected to rigorous examination to determine the amount and quality of milk produced with a view to securing descendants inheriting good qualities as milk producers. Inspectors and rural overseers or experts assist the agronomists in their work of inspection and service to the farmers.

In the summer of 1928 the Board of Agronomy began a series of radio lectures on agriculture and stock-raising for the special benefit of the rural people. They are given on Mondays and Thursdays of each week at one o'clock in the afternoon. The subject of the first lecture which was broadcast on July 9 was the Board of Agronomy and its Work in Agriculture and Stock-raising. Some of the other subjects broadcast during the summer and early fall were: How to Select a Dairy Cow, Care of Fruit Trees, The Sheepfold at this Season, What Trees should we Plant? Improvement of our Meat Production, The Garden and its Care, Improvement of Land Inferior for Forest Plantations, Conservation of the Products of the Farm, The Hen and her Part in Rural Exploitations, The Value of Seeds for Sowing, Organization of a Grange or Farm, Improvement of the National Wine Production, Bees as Aids in Farming, and Formulas for Preparing Inexpensive Remedies on the Farm and in the Home.

The Section of Information and Instruction furnishes information, free of charge, upon request, to rural associations, stock-raisers, and farmers on all subjects connected with agriculture and stock-raising and derivative industries; Section of Information and Instruction arranges plans and furnishes equipment for school gardens; and supplies implements, seeds, fruit, and timber trees, poultry, and bees without charge. It collaborates with the Section of Agricultural Development and Protection in organizing and establishing experimental farms, drawing up plans of work according to the purpose of the demonstration, expense involved, etc. The section has 11 seed-selecting machines, four carried on double flat railway cars, and seven on motor trucks which travel over the country, select and clean seed for the farmers. The machines mounted on motor trucks visit sections at a distance from the railroad, remaining two or three days at some centrally located farm. During 1927, 5,000,000 kilograms (about 11,000,000 pounds) of seed were cleaned, free of charge. Motion picture apparatus carried over the country on

Itinerant
cinema

motor trucks has proved a very successful means of giving instruction, a second exhibition being requested in every place visited by the itinerant cinema. In July, 1928, the Section of Information and Instruction was preparing to send out five of these trucks, equipped with films giving theoretical and practical instruction in agriculture, preservation of fruit and vegetables, dairying, wine-making, and stock-raising. By means of these outfits instruction is brought to the very homes of the farmers.

I t a l y

Some results of the grain campaign. - At a meeting of the permanent grain committee, in September, 1928, the Minister of National Economy in a speech entitled, "Results of the New Grain Policy of the Fascist Government, and Directions for the Year 1928-29," gave a resume of the results obtained

Object-measures
taken

in three years from the intensive grain campaign (la battaglia del grano) inaugurated by the royal decree of July 28, 1925. The main object of this campaign, to increase the production of grain in Italy, and thus do away with the heavy importations, required each year to meet the demand, is being satisfactorily realized. The measures taken for increasing grain production have resulted in intensifying all branches of agricultural activity throughout the country. Some of the most important measures are the reenforcement of technical institutions of propaganda; increased number of scientific experiments and practical demonstrations; encouragement of the use of electric and motor power in farm operations; provision of facilities for agricultural credit; competitions with prizes to encourage increased production and the use of modern cultural practices.

One of the marked results of the grain campaign is the increased number and improved financial condition of the itinerant chairs, the greater part of the experimental and demonstration work devolving upon the professors who come in constant contact with the farmers to assist them in their problems in connection with grain production.

Increase in
number of
itinerant chairs

An idea of the increased volume of work as a result of the grain campaign may be obtained from the fact that the number of chairs and sections increased from 255 in 1925 to 658 in 1928, or nearly three times as many as were in operation before the campaign began. Much more adequate provision has been made for the maintenance of the professors who for years received very meager salaries, many of them remaining at their posts only from a sense of duty and love for the work.

Practical results of definite value have been obtained from the establishment of demonstration fields. In 1925-26, 9,000 fields were

Other important results - demonstration field, introduction of modern machinery

maintained, and in the two following years, 8,000, as, owing to the positive results obtained, a reduction in number was considered advisable. Intensive work has been done in introducing modern farm machinery and farmers have been aided in purchasing seeders, plows, and other implements. To encourage the use of steam-driven apparatus of the Fowler type in tillage operations, large loans and contributions have been

granted, and provision made for training operators. Special provision has been made for small farmers to obtain select seed at the same price as that of ordinary grain, and forage plant seed at reduced price. To encourage the use of good grain seed, plantings were made in southern and insular Italy, Lazio, and Maremma, where 150,000 quintals (more than 15,000,000 pounds) of seed, have been produced, and 1,650 stations established, equipped with grain seed-selecting machines. One of the most important results of the grain campaign has been the improvement in cultural practices and the renewed activity throughout the Italian countryside in all branches of agriculture.

The Fascist Government expressed itself as greatly pleased with the results of the grain campaign, and especially with the data for the 1927-28 crop. In spite of adverse weather conditions and a smaller area under cultivation than the previous year, the figures published by the Central Institute of Statistics showed considerable increase in production, results which were all the more satisfactory in view of the fact that the grain crops of the other European countries which had the same unfavorable season were considerably below normal. From an area of 4,962,800 hectares, which was 13,000 hectares less than sown to grain in 1926-27, 62,214,800 quintals or more than 6,310,000,000 pounds of grain were harvested, or an increase of 8,923,000 quintals (904,859,890 pounds). This is an average production of 12.5 quintals (about 1,268 pounds) per hectare for 1927-28. For the period from 1926 to 1928 the average production was placed at 11.9 quintals per hectare against 10.3 quintals in the five-year period 1909-14.

Annual prizes for itinerant professors. - The decree of April 5, 1928 carries provisions for an annual prize to be conferred by the Ministry of National Economy on directors of provincial chairs of agriculture who have displayed exceptional activity in their territories and have obtained tangible results therefrom. The prize will consist of a gold medal and the sum of 10,000 liras (nearly \$2,000) granted as an extraordinary contribution to the retirement pension. The object of the prize is to encourage the professors to put forth their best efforts and to give proper recognition to the work of the itinerant chairs.

Zootechnical course for itinerant professors. - A course lasting from May 7 to June 15, 1928, was held by the National Body of Itinerant Chairs of Agriculture (Ente Nazionale delle Cattedre Ambulanti di Agricoltura) for the purpose of promoting the interest of young directors in zootechny, increasing their scientific knowledge of the subject, and giving them practical knowledge in working in the accredited centers of Italian stock-raising in promoting the study and improvement of local zootechny. The number of students was limited to 20. The program of technical lessons and practical work was alternated with excursions to well-known estates in several provinces to study various phases of the subject. The young men judged hundreds of cattle of different breeds under the supervision of the instructors. Visits were made to the Experimental Zootechnical Institute in Pavia and the Higher Institute of Agriculture at Milan. The young men took notes of all the lectures, stood tests given by the teachers, and at the close of the course

prepared a written examination on the following subject: "Brief description of the most important breeds of domestic animals in the various provinces, including the mesological conditions under which each breed lives, their advantages and defects, and means for improvement, with a view to increased production."

Those attending the course received certificates as a result of marks obtained in the lessons and tests, and on the final examination.

Reasons for satisfactory results	The very satisfactory results obtained from this course were chiefly ascribed to the following facts:
	(a) The limited number of pupils, enabling each one to receive equal benefit from the instruction;

(b) The selection of young men showing special aptitude for zoo-technical work or study;

(c) Methodical alternation of theoretical lessons with practical exercises;

(d) Visits to agricultural-zootechnical farms of note to study specific questions;

(e) Strict requirement of regular attendance with penalty for absence from more than 5 lessons.

(f) Final examination with award of certificate.

G e r m a n y

Lower Silesia.

Appointment of a dairy specialist. - On account of the great importance of developing dairy farming, the agricultural chamber of Lower Silesia appointed a specialist in April, 1928, to supplement existing provisions in this line. The person selected was a practical farmer, trained in an agricultural institution, who had the title of "Diplomlandwirt," or graduate farmer. At the time of his appointment he was a scientific assistant in dairying in the Prussian Experimental and Research Institute at Kiel, and through training and experience was thoroughly qualified for his new activities. The duties of the dairy specialist include:

Duties of specialist	(1) Visits to farmers, especially owners of large and medium-sized farms, to give instruction and advice in dairy-farming, the establishment of dairying in close cooperation with the work of the animal breeding office and other offices, and the correlation of dairying with green land farming; in forage production; in production and utilization of milk; in care of animals, handling milk, building improved dairy cattle stalls, procuring dairy utensils and equipment; and in dairy work suited to individual farms.
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1. The first part of the paper is devoted to a general discussion of the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β . It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

2. In the second part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

3. In the third part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

4. In the fourth part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

5. In the fifth part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

6. In the sixth part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

7. In the seventh part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

8. In the eighth part of the paper the problem of the existence of solutions of the system of equations (1) for arbitrary values of the parameters α and β is solved. It is shown that the system has solutions for all values of the parameters α and β if the function $f(x)$ is continuous and has a bounded derivative.

(2) Cooperation with and advice to such organizations as dairy societies and federations, federations of dairy farm owners and tenants, milk producers' associations, organizations for the sale of farm products, local and provincial dairy commissions for the encouragement of milk consumption, agricultural societies, animal breeding organizations in regard to milk production and utilization.

(3) Cooperation with and advice to administrative bodies regarding preliminary arrangements for the appointment of welfare officials, district physicians, and veterinarians.

(4) Participation in awarding prizes to dairy farms by the dairy institute of the agricultural chamber of Breslau.

(5) Arranging milk, butter, and cheese shows, exhibitions, and tests in cooperation with the dairy institute of the agricultural chamber of Breslau.

(6) Cooperation in standardizing brands of milk, butter, and cheese.

(7) Arranging courses in milk production and utilization.

(8) Holding lectures on subjects connected with dairying, especially dairy farming combined with general farm management.

(9) Attending agricultural and dairy meetings.

(10) Encouraging the establishment of dairy associations, mutual control institutions and selling organizations.

According to the decision of the agricultural chamber, the specialist must give his services free of charge to farmers, who, however, are required to pay his traveling and other expenses, in whole or in part. Persons who are not farmers who desire his assistance pay a compensation determined by the chamber.

N e w Z e a l a n d

Women's institutes. - The idea of women's institutes was introduced into New Zealand by a country woman who became acquainted with these associations through attending the first national exhibition of women's institute handicrafts in Westminster in 1918, while on a visit to England. After her return to New Zealand, an institute was organized in Rissington, a small farming district in the province of Hawke's Bay, North Island. The movement progressed slowly but surely for a few years, and in November, 1926, there were 10 institutes with a membership of more than 500 women.

The aims of the institutes are home-making, cooperation, and citizenship. The English institutes have been followed as far as possible in regard to methods of organization and management. Each institute includes the women of a district and is strictly a non-sectarian and non-party organization. All members pay the same subscription, which is a very small amount, and have equal voting powers in every matter, including the election of a committee and a president. The main function of the committee is to arrange programs for the monthly meeting which constitutes the principal activity of the institutes. A typical program includes a lecture or a talk on some subject as a visit to England and Ireland, principles of nutrition, village life in India, labor-saving devices in the home; a demonstration in glove-making, china mending, spinning, flower-making, raffia baskets, short cuts in dress-making, poultry-keeping, or fruit-tree pruning; a competition in making the best biscuits, making the best article from waste material, and the like; a haymakers' dance, and other forms of entertainment. Classes for instruction and practice are often organized as a result of a demonstration of a handicraft or household process.

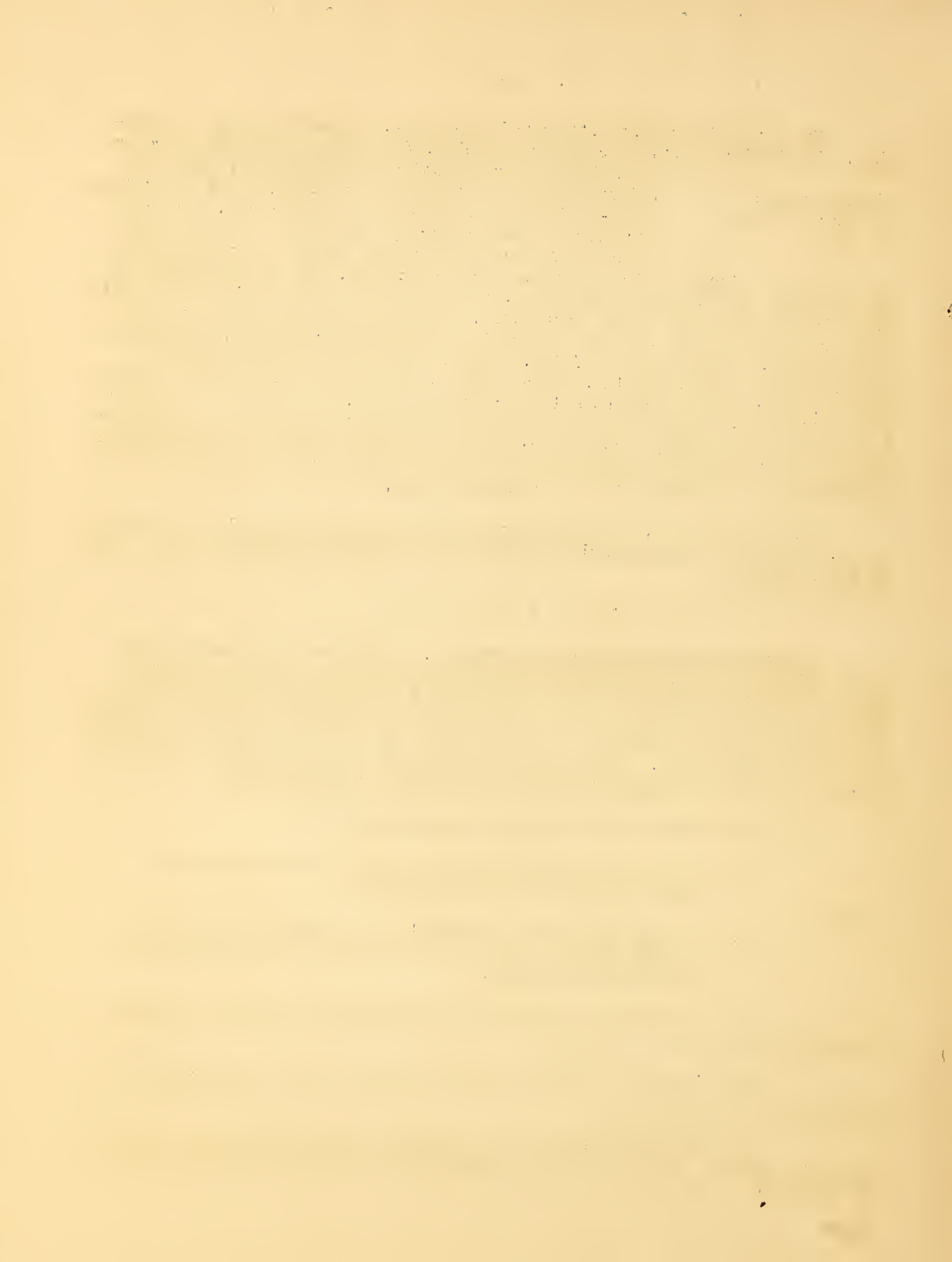
In October, 1928, the number of institutes in New Zealand had increased to 49. There are two provincial federations - Auckland and Hawke's Bay - both in North Island.

S o u t h A f r i c a

Constitution of the Prosperity League. - The Prosperity League, the junior division of the Transvaal Agricultural Union, the objects of which are to establish cooperation among farmers and between societies and organizations of farmers with a view to the promotion of farming interests throughout South Africa, was organized several years ago for the purpose of forming boys' and girls' clubs. At a special congress of the Union held at Pretoria on June 8, 1928, the League adopted the following constitution:

(1) The object of the Prosperity League shall be:

- Object
- (a) To raise the standard of the social life of the rural people and make it more attractive.
 - (b) To give agricultural instruction to children and encourage them to put into practice what they have learned, thus becoming self-reliant.
 - (c) To bring up children in an atmosphere of healthy competition, mutual help and cooperation.
 - (d) To teach children to become owners of farm commodities through their own efforts.
 - (e) To keep children on the farm and induce the town children to go to the farm by showing them the possibilities of building up their own enterprises.



(2) Members of the League shall be

(a) School children and other children not over 18.

(b) Teachers of both sexes.

Members

(c) Persons entrusted with the organization and administration of the League.

(d) Persons willing to provide facilities for the children to carry out their projects, who are enrolled as honorary members.

(3) Organization.

Organiza- (a) The staff and pupils of a school form a branch of the Prosperity League, which elects its own officer and draws up its own rules, which, however, must not be contrary to the general constitution.

(b) Each branch must see that its members take part in the competitions prescribed by the Prosperity League committee, and that an agricultural day is held at least once a year. (Two or more branches may join in organizing an agricultural day).

(c) One member of each branch of the Prosperity League shall be a member of the extension committee of the local branch of the Transvaal Agricultural Union, where such a committee exists, and shall form the connecting link between his branch of the League and the extension division of the department of agriculture.

(d) The extension members elected by all the branches of the Prosperity League in the district shall elect two from their number as members of the district Union of the Transvaal Union.

(e) The branches of the Prosperity League in the same district nominate one delegate to the annual or other congress of the Transvaal Union.

(f) The Prosperity League Committee is composed of 10 members elected at the annual congress.

Boys' club camp. - A very successful camp for boys, members of the Prosperity League, the boys' and girls' club organization of South Africa, was held for a week in April, 1928, during the Easter vacation. The camp was organized by the principal of the Potchefstroom Agricultural School in collaboration with the Transvaal Education Department and the inspector of agricultural education, and was held on the grounds of the experiment station connected with the school. Tents and cooking utensils were donated by the military authorities and teachers of the agricultural school and extension officers gave their time to the work of instruction and supervision.

Organization

The boys were required to furnish the provisions or the equivalent in money - about 7 shillings 11 pence (\$1.82) each for the week, with 4 shillings (\$.96) extra for milk. Half fare was allowed by the railroad when ten or more pupils came from the same school.

The object of the camp was to provide a meeting place in rural surroundings where club members could discuss agricultural problems and obtain information on the best methods of successfully conducting clubs; to persuade school children who were not club members to take part in the camp activities and in this way encourage them to form clubs in their own schools; and to give the young people an enjoyable holiday.

After arriving at the camp, the boys were given lessons in assembling tents, and were then divided into groups of six to each tent. From their own number they appointed a captain in charge of the camp and a sergeant for each tent to carry out the captain's orders; wood carriers; coffee and meal supervisors; a cheer leader to arrange the evening entertainment around the camp fire; a judge, crown prosecutor, advocates, and two policemen; sanitary inspectors to inspect the camp daily; and water supervisors to arrange for the water supply.

The daily program began at 6:00 A.M., the rising hour of the wood carriers and coffee and meal supervisors. At 6:30 the general rising bell rang, and a half hour was devoted to dressing and putting the tents in order. Then came a half hour of physical exercises, followed by breakfast from 7:30 to 8:30. After breakfast an hour was devoted to camp duties. From 9:30 to 12:30 visits were made to the different sections of the experiment farm and simple demonstrations were given by the extension officers or by the school officials, in connection with the main points of interest as a sheep demonstration, a dairy cow demonstration, and a demonstration on the land. The dinner hour, rest period, and leaders' conference consumed the time from 12:30 to 2:30 P.M. Then followed sports from 2:30 to 5:00 P.M. The boys had a rest period from 5:00 to 6:00 P.M., while supper and camp duties occupied the next hour, after which they gathered around the camp fire for vespers, songs, court, and the review of the day's work. In the court boys who had been reported to the police officers by some of their own number as guilty of misdemeanors were given an opportunity to prove their innocence and to appoint one of the advocates to plead their cause. The case was then taken up by the crown prosecutor and finally decided by a jury composed of the rest of the camp members. This proved to be an excellent way of handling irregularities in conduct, not only improving camp discipline, but affording amusement. The court also helped to carry out one of the objects of the camp, the development of initiative and leadership on the part of the young people.

This camp, the second held in South Africa for club members, was considered so successful that the organizers decided to make it a yearly event at Potchefstroom.



